CLAIMS:

1. A method of providing images on a screen, the method comprising the steps of:

- emitting light from a first set (12) of light-emitting units provided in a two-dimensional array having at least two lines of light-emitting units (1, 2, 3, 4, 5, 6, 7, 8, 9), each line including at least two light-emitting units, (step 52),
- projecting the light from said first set of light-emitting units on the screen, (step 56), and
- displacing the light projected on the screen from each light-emitting unit, such that each light-emitting unit provides a tile (34) of the screen including at least two pixels in a line aligned in one direction on the screen, (step 54).

2. A method as claimed in claim 1, wherein each unit in a line is aligned with another unit in all other lines, where the light-emitting units of one line provide light for different pixels than the units of other lines and at least two of the light-emitting units in each line are arranged to provide light for separate pixels on said screen.

3. A method as claimed in claim 1, wherein the line is a vertical line and the light from each light-emitting unit is displaced in a vertical direction so that the pixels of a tile are aligned vertically, and the step of displacing further includes displacing the light projected on the screen from each light-emitting unit in a horizontal direction, such that each tile also comprises horizontally aligned pixels.

4. A method as claimed in claim 1, wherein the first set of light-emitting units provides light for all pixels of the screen.

5. A method as claimed in claim 1, wherein the step of displacing includes the step of transmitting the light of each light-emitting unit through a transmission medium.

6. A method as claimed in claim 1, wherein the step of displacing is performed in such a way that the tile of one light-emitting unit in a set slightly overlaps the tile of at least one neighbouring light-emitting unit in said set.

7. An image projection device (10) comprising:

- at least one first set of light-emitting units (12; 40, 42, 44) provided in an array including at least two lines of light-emitting units (1, 2, 3, 4, 5, 6, 7, 8, 9) having at least two light-emitting units each, and
- a light-displacing unit (36; 48, 50; 58; 62, 64) arranged to displace the light from each light-emitting unit before projection on a screen (16), such that each light-emitting unit provides a tile (34) comprising a line including at least two pixels aligned in one direction on the screen.

8. An image projecting device as claimed in claim 7, wherein each light-emitting unit of a line is aligned with another unit in all other lines, where the light-emitting units of one line provide light for different pixels than the units of other lines and at least two of the light-emitting units in each line are arranged to provide light for separate pixels on said screen.

9. An image projection device as claimed in claim 7, further including a screen (16) onto which light from the first set of light-emitting units is projected.

10. An image projection unit as claimed in claim 7, wherein the first set of light-emitting units provides light for all pixels of the screen.

11. An image projection device (10) as claimed in claim 7, wherein the light-displacing unit comprises a first medium (34; 48; 64) which is rotatable around a first axis for providing tiles having at least two pixels aligned in a first direction on the screen.

12. An image projection device as claimed in claim 11, wherein the first medium is transmissive and the light-displacing unit (36) includes a number of segments (38) of the first medium which is rotatable around said axis, and each segment has a varying width (W) for displacing the light from a set of light-emitting units in the first direction.

13. An image projection device as claimed in claim 11, wherein the light-displacing unit (36) comprises a number of segments (38) of the first medium, each segment is provided with a first side facing the light-emitting units and providing a different angle of incidence for the light from a set of light-emitting units, such that the light from said set of light-emitting units is displaced in a second direction by each segment for providing the tiles (34) with pixels which are also aligned in the second direction.

14. An image projection device as claimed in claim 12, wherein all the segments have the same width variation.

15. An image projection device as claimed in claim 12, wherein the segments are provided as a number of prisms provided around a wheel and providing a polygonal shape to the light-displacing unit.

16. An image projection device as claimed in claim 11, wherein the light-displacing unit further comprises a second medium (50) which is rotatable around a second axis perpendicular to the first axis for displacing the light projected on the screen from each light-emitting unit in a second direction, and both the first and second mediums are transmissive.

17. An image projection device as claimed in claim 11, wherein the light-displacing unit further comprises a second medium (62) which is rotatable around a second axis perpendicular to the first axis for displacing the light projected on the screen from each light-emitting unit in a second direction, and both the first and second mediums are reflective.

18. An image projection device as claimed in claim 7, further including a second and a third set of light-emitting units (42, 44) and a transflective unit (46), wherein the transflective unit is arranged to reflect the light of the first set of light-emitting units, reflect the light of the second set of light-emitting units and transmit the light of the third set of light-emitting units.

19. An image projection device as claimed in claim 18, wherein the transflective unit is placed in such a way that the light from the different sets of light-emitting units passes the transflective unit before reaching the light-displacing unit.

20. An image projection device as claimed in claim 7, wherein the light-displacing unit is arranged in such a way that a tile slightly overlaps neighbouring tiles.

21. An image projection device as claimed in claim 7, in which it is a display.

22. An image projection device as claimed in claim 7, in which it is a projector.

23. A television set incorporating a display as claimed in claim 22.